

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 2002203868  
PUBLICATION DATE : 19-07-02

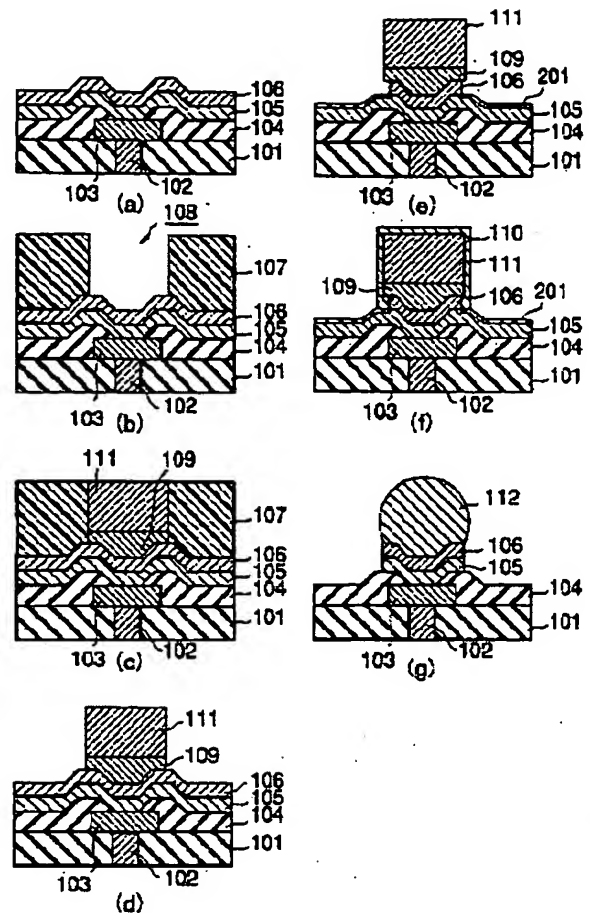
APPLICATION DATE : 27-12-00  
APPLICATION NUMBER : 2000399292

APPLICANT : TOSHIBA CORP;

INVENTOR : EZAWA HIROKAZU;

INT.CL. : H01L 21/60

TITLE : FORMING METHOD OF ELECTRODE



ABSTRACT : PROBLEM TO BE SOLVED: To easily form an electrode consisting a Sn-Ag three-dimensional based solder.

SOLUTION: The forming method of the electrode includes a process for forming a laminated film consisting of an Ag plated film 109 and an Sn plated film 111 formed by using an electrolytic plating method on an Ni/Pd laminated film 106 exposed on the bottom part of the opening 108 of a resist film 107 selectively respectively, a process for removing the resist film 107 and the Ni/Pd laminated film 106 and selectively forming a natural oxidation film 201 on the surface of the exposed Ni/Pd laminated film 106, a process for forming a Cu plated film 110 on the surface of the laminated films 109, 111 by using the electrolytic plating method in the state that the natural oxidation film 201 is formed, a process for making the laminated films 109, 111 and the Cu plated film 110 alloy and forming a solder bump 112, and a process for making the solder bump 112 a mask and removing a Ti film 105.

COPYRIGHT: (C)2002,JPO

Best Available Copy